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SP341-E The Chinch Bug in Grain Sorghum

The University of Tennessee Agricultural Extension Service

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Insects

The Chinch Bug in Grain Sorghum

Charles R. Patrick, Professor and Scott Stewart, Associate Professor, Entomology and Plant Pathology and Angela Thompson, Assistant Professor, Plant Sciences

Biology and Description

The chinch bug is very widely distributed throughout the United States but is rarely abundant enough to cause serious crop losses except in certain areas. However, during an outbreak, it can completely destroy stands of corn and grain sorghum.

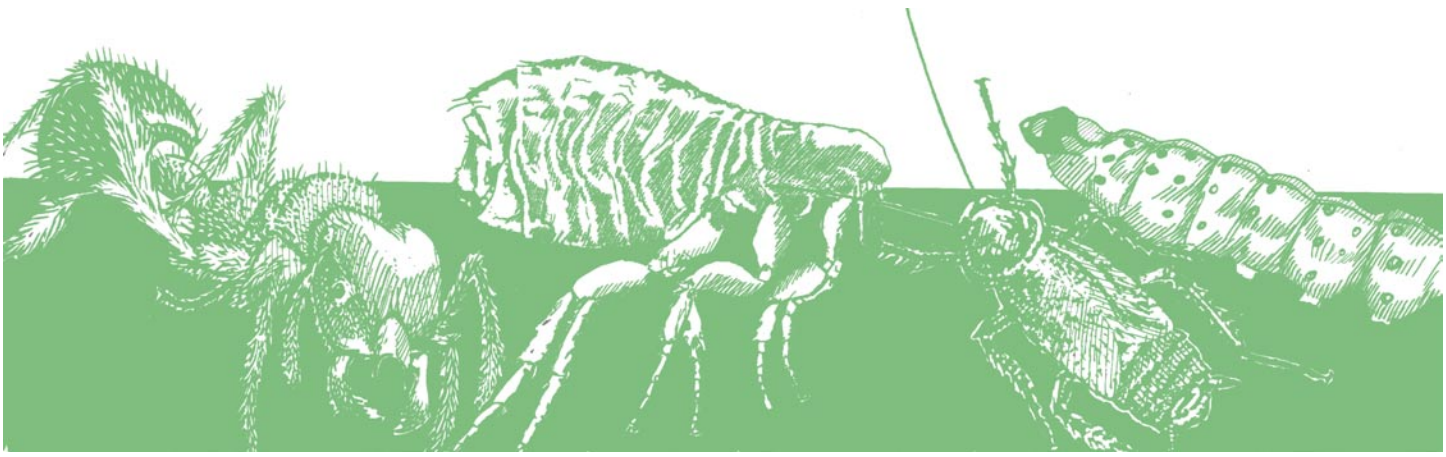
Chinch bugs feed successfully only on plants of the grass family. When infestations are severe and when normal food plants are scarce, chinch bugs will feed on legumes or other non-grass plants. Small grains, such as barley, wheat, rye and oats, are particularly susceptible to chinch bug damage. The most favored plants are corn, sorghum, broom corn, Sudangrass and millet.

Adult chinch bugs are black with reddish legs and milky white wings (Figure 1). Adults are about 1/6 inch long. The adults have a black triangular spot at the middle of their outer wing margin. Young chinch bugs resemble adults in shape but are red or reddish-orange when they are first hatched. As they mature, they turn brown to black in color and develop a white band across their backs. It is common for chinch bugs to be aggregated or clustered on individual plants.

Figure 1. Adult and immature chinch bugs on stalk (Scott Stewart)

Damage and Symptoms

Both adult and immature chinch bugs suck sap from sorghum plants. Chinch bugs damage grain sorghum by withdrawing large amounts of sap from the stems and underground plant parts. During the seedling stage, chinch bugs are often found near or below the soil line and behind leaf collars. Small plants are most susceptible to injury. Older plants are better able to withstand chinch bug attack but may become reddened and weak (Figure 2). Stunting and lodging are common signs of chinch bug damage. When chinch bugs outbreaks occur, routine scouting is necessary to detect infestations and prevent economic damage.



Economic Threshold and Control Practices

Examine 10 consecutive plants at 5 to 10 random locations over the entire field. Count and record the number of adults and immatures present on each plant. If 20 percent of plants under 6 inches tall have two or more adult chinch bugs or if adults or immatures are present on 75 percent of the plants, treat with a recommended insecticide.

Early infestations are often heavier near field borders. Insecticide applications around the borders of fields sometimes can prevent the need to spray entire fields. Planting early is recommended as chinch bugs are more prevalent in late planted grain. Chinch bugs are sometimes difficult to control with insecticides because of their habit of hiding behind leaf sheaths at the base of the plants. Thorough coverage of the plant with an insecticide is necessary to achieve control. To achieve best results in seedling sorghum, insecticide applications should be directed at the base of plants with a minimum application volume of 15 gallons per acre.

Figure 2. Chinch bug damage (Bob Wright, Texas A&M University)

Table 1. Recommended Insecticides

Material	Rate/Acre	Preharvest Interval
Lorsban 4E	1-2 pt	30-60 days
Mustang Max	3.2-4.0 oz	14 days - grain
Warrior	3.84 oz	21-28 days (see label)
Sevin XLR Plus	1-2 qt	21 days
Asana XL	5.8-9.6 oz	21 days
Baythroid 2	2.0-2.8 oz	14 days
Karate 2.08	1.92 oz	21 days
Gaucho 480	8 oz/100 wt	45 days
Prolex 1.25	1.54 oz	21 days

WARNING: This publication serves only as a guide, not a replacement of the label.

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

Pesticides recommended in this publication were registered for the prescribed uses when printed. Pesticide registrations are continuously reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by The University of Tennessee.

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